

Date: Mon, 25 Jul 94 04:30:17 PDT
From: Ham-Ant Mailing List and Newsgroup <ham-ant@ucsd.edu>
Errors-To: Ham-Ant-Errors@UCSD.Edu
Reply-To: Ham-Ant@UCSD.Edu
Precedence: Bulk
Subject: Ham-Ant Digest V94 #238
To: Ham-Ant

Ham-Ant Digest Mon, 25 Jul 94 Volume 94 : Issue 238

Today's Topics:

 ??Loop or dipole ..BEST??
 DDRR antenna for Radio Astronomy
 Feed lines and AC power
 How to match 2-meter 1/2 wave
 Jupiter decametric emission info
 Log Periodics ?
 mfj 1796

Send Replies or notes for publication to: <Ham-Ant@UCSD.Edu>
Send subscription requests to: <Ham-Ant-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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(by FTP only) from UCSD.Edu in directory "mailarchives/ham-ant".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Mon, 25 Jul 1994 03:44:06 GMT
From: ihnp4.ucsd.edu!library.ucla.edu!news.ucdavis.edu!chip.ucdavis.edu!
szhall@network.ucsd.edu
Subject: ??Loop or dipole ..BEST??
To: ham-ant@ucsd.edu

I am interested in someone's comment on the following..Right now I
have a dipole about 15 feet off the ground and I considering in making a
hortizontal loop around the lot of my house 15 feet off the ground..Would
the loop be that much better?? It has to be a hortizontal loop I can't put
up a vertical loop. I almost forgot this for HF 10-40 meters...thanks
for reading this...73es..Jeff

Date: Sun, 24 Jul 1994 23:04:33 GMT

From: ihnp4.ucsd.edu!usc!howland.reston.ans.net!agate!dog.ee.lbl.gov!
newshub.nosc.mil!news!aburto@network.ucsd.edu
Subject: DDDR antenna for Radio Astronomy
To: ham-ant@ucsd.edu

In article <32964@uswnvg.uswnvg.com> tconboy@uswnvg.com
(Terry A. Conboy) writes:

>Just take all the dimensions and multiply them by $(21.6/25.2)=0.857$
>To be exact, this should include the diameter of the tubing, but you
>probably can get away with using the same tubing as the original.

Thanks, and thanks to all the others that sent email too. Appreciate your help. Didn't know about the tubing diameter relationship. I'm new at this. Actually I got a slightly bigger piece of copper tubing (3/8 inch vice 1/4 inch). It just 'seemed' more copper would be better but I really didn't know. Also I just assumed 14 wavelength at 25.2 MHz to get the copper tubing length (117 inches), but I read in the ARRL Antenna Book that the actual frequency (from empirical experience) will be at least 5% less due to stray capacitance. So I made the tubing length 111 inches instead. I built the antenna already out of 3/8" soft copper tubing, 1+1/4" PVC pipe, and fine mesh screen wire. It looks good. I'm not sure it really works :-), but I leaned the antenna over last night so it would look at Jupiter and listened to noise for several hours. I got excited once when the noise level went up 5 dB, but when I switched to WFM I heard voice. Other than that I heard nothing. I'm building a crude mount for it with axis aligned East-West so I can rotate the 'beam' up and down to (ahem) 'lock' on to Jupiter :-). Oh well, it is fun and it cost only \$70 to build with coax cable and connectors and all.

>Actually, I am surprised that they are using this antenna for radio
>astronomy. It functions as a very short vertical antenna with a
>capacity hat, so it radiates best at the horizon and minimally straight
>up. In general, vertically polarized antennas are great for receiving
>man-made noise, which could obscure the emissions you want to hear. But
>maybe I don't fully understand the application...

I'm glad you raised this point as I'm wondering too. I'm new at this and I don't really (exactly) know what I'm doing. In the Radio Astronomy Journal article the antenna was referred to as a "DDRR Loop Antenna". However when I looked up DDRR antennas in the ARRL Antenna Book and in magazine articles in QST and Electronics I found that the DDRR was similar to but in detail really different from the antenna I was trying to build.

>It could be that your design is not the classic DDRR. It could be the

>classic "halo" antenna (which is a horizontally polarized half
>wavelength bent into a loop with the ends *almost* touching) mounted
>above a ground plane to give it about 3 dB gain straight up. I would
>expect that to work great in your application.
>

I'm probably building the classic "halo" antenna, but if it is
1/2 wavelength then what I built might be wrong for 25.2 MHz or so?

Basically I have a 111" long and 3/8" diameter soft copper tube bent
into a circle with about a 2" gap. This is held about 6" above a
60" by 60" ground plane made of screen wire mesh. The coax cable
(RGU-58) has center conductor attached near to one end of the copper
tube and the coax shield is attached to the ground plane. Thats it
in a nutshell.

Al Aburto

Date: 24 Jul 1994 14:06:56 GMT
From: ihnp4.ucsd.edu!swrinde!hopper.acm.org!ACM.ORG!SMITHSON@network.ucsd.edu
Subject: Feed lines and AC power
To: ham-ant@ucsd.edu

Greetings!

I'm getting ready to dig a deep trench from my house to my barn (120') to
get water and power out there. The barn is in the middle of a large pasture,
and is also very close to where I plan to put a tower some day. My question
is this. Would there be any problem in running some coax out to the barn
in the same trench? The water and power will be enclosed in 4" PVC pipe
and come in through the basement wall. I was thinking of putting in
another pipe and running coax, etc. through it. Any thoughts?

Thanks!

-Brian n8wrl
smithson@acm.org

Date: Sun, 24 Jul 1994 16:11:29 GMT
From: news.Hawaii.Edu!kahuna!jeffrey@ames.arpa
Subject: How to match 2-meter 1/2 wave
To: ham-ant@ucsd.edu

jdc3538@ulfb.isc.rit.edu (J.D. Cronin) writes:

>

> How does one match a 1/2 wave antenna to 50 ohms?

If you lengthen it a bit so that it's 5/8 wave then you can match it easily - see the ARRL Handbook for details about making 5/8 wave verticals for 17, 12, 2, and 1 1/4 meter bands; in particular, page 33-30 in the 1991 edition gives details for the 2M antenna.

NH6IL jeffrey@math.hawaii.edu

Date: Sat, 23 Jul 1994 03:08:26 GMT

From: ihnp4.ucsd.edu!usc!nic-nac.CSU.net!charnel.ecst.csuchico.edu!

yeshua.marcam.com!hookup!reptiles.org!geac!torsqnt!problem!vigard!

mdf@network.ucsd.edu

Subject: Jupiter decametric emission info

To: ham-ant@ucsd.edu

pharden@Mr-Hyde.aoc.nrao.edu (Paul Harden) writes:

>Here is some basic information regarding Jovian decametric emissions to

>help answer some of the questions thus far raised on the net.

excellent post!

> If the signal comes from space, it will
> strike each antenna about the same time; if it comes from earth, the
> signal will slide across the antennas one-at-a-time. Thus, only
> coherent signals (those arrive about the same time) are processed as
> coming from space.

what is the general configuration of these arrays? and i don't see what is preventing a on-earth signal from arriving at the array in a manner similar to what is expected for an off-earth signal. does this mean that the arrays are absolutely mindbogglingly gigantic, or most of the terrestrial noise one receives has a source fairly close to the array? or some other reason?

--

Matthew Francey

mdf@vigard.mef.org

ve3rqx@io.org

"live before you die"

GPS(NAD27): N43o34.210' W079o34.563' +0093m

Date: Sun, 24 Jul 1994 19:06:41 +0000

From: ihnp4.ucsd.edu!swrinde!pipex!demon!plains.demon.co.uk!Nick@network.ucsd.edu

Subject: Log Periodics ?

To: ham-ant@ucsd.edu

HI,

Does anybody know where I can find a program for a PC that will allow me to design a log-periodic ?

I have a very old textbook with graphs and formulae, surely these days there must be something that does it by computer !

Thanks,

Nick G4IRX

```
=====
| Nick Button,      Nottingham, England |
| Internet:- nick@plains.demon.co.uk.   |
=====
```

Date: Mon, 18 Jul 1994 19:23:43 GMT
From: pa.dec.com!datum.nyo.dec.com!doublj.njo.dec.com!jeff@decwrl.dec.com
Subject: mfj 1796
To: ham-ant@ucsd.edu

In article <gregCt52vw.HD2@netcom.com> greg@netcom.com (Greg Bullough) writes:
>In article <dmartin.093o@dlink.uucp> dmartin@dlink.uucp (Dave Martin) writes:
>>NEED ALL THE INFO I CAN FIND AS I CANNOT HAVE MORE THAN 1 ANTENNAE....
>>PLEASE RESOPND QUICKLY!!!!!!!
>>THANK YOU FOR READING THIS.
>
>This seems the ideal antenna for areas with antenna restrictions. As
>nobody on the net seems to have thus far succeeded in obtaining this
>product, which has been announced and advertised for several months,
>it ranks as one of the least visible antennas yet devised.
>
>Recommendation: consider a product which exists! (one of the GAP verticals
>includes VHF and 80m coverage, at the expense of WARC bands).
>

I had also considered this antenna - I placed my order and after checking in with mfj more than a dozen times over 4 months, cancelled my order! Very frustrating todo business this way - I was repeatedly told "give it another week" - I really wanted to get on the air!

I ended up getting an R7 and have been extremely pleased with this antenna (except for the very limited bandwidth on 40m) - I also use a transmatch with the R7 and have had many fine QSO's on 80m (not high power).

I recently ran a contest using an amp and pushing 800watts pep for more than 24 straight hours - no problem (except rfi/tvi, but that is another post :-)

Good luck!

-jj - n2mzh

Date: Sun, 24 Jul 1994 20:47:49 GMT
From: rit!isc-newsserver!ultb!jdc3538@cs.rochester.edu
To: ham-ant@ucsd.edu

References <1994Jul23.020711.2434@ultb.isc.rit.edu>, <N4wXPc3w165w@opus-ovh.spk.wa.us>, <CtGCz6.3x4@news.Hawaii.Edu>
Subject : Re: How to match 2-meter 1/2 wave

In article <CtGCz6.3x4@news.Hawaii.Edu> jeffrey@kahuna.tmc.edu (Jeffrey Herman) writes:

>jdc3538@ultb.isc.rit.edu (J.D. Cronin) writes:

>>

>> How does one match a 1/2 wave antenna to 50 ohms?

>

>If you lengthen it a bit so that it's 5/8 wave then you can match

>it easily - see the ARRL Handbook for details about making 5\8

>wave verticals for 17, 12, 2, and 1 1/4 meter bands; in particular,

>page 33-30 in the 1991 edition gives details for the 2M antenna.

>

>NH6IL jeffrey@math.hawaii.edu

>

I've seen the 5/8's wave articles in the Handbook and the Antenna Book.
A 1/4 wave ground plane is recommended, which is difficult on a HT.

J-poles don't need a ground plane to work, but they match a 1/2 wave with a 1/4 wave section. I built a j-pole for 440 on a BNC connector and it works great. The same antenna would be a bit cumbersome on 2-meters, hence the desire to match a 1/2 wave without a 1/4 wave stub.

73...Jim N2VNO

Date: Tue, 19 Jul 1994 12:11:34 GMT
From: pa.dec.com!datum.nyo.dec.com!doublj.njo.dec.com!jeff@decwrl.dec.com
To: ham-ant@ucsd.edu

References <dmartin.093o@dlink.uucp>, <gregCt52vw.HD2@netcom.com>,
<30f3n9\$52c@jabba.cybernetics.net>wrl
Subject : Re: mfj 1796...MFJ's attitude

In article <30f3n9\$52c@jabba.cybernetics.net> ab4e1@jabba.cybernetics.net (Stephen Modena) writes:

>
>I love it...use it regularly...works fine...but MFJ works with the
>lowest possible quality assembly plants in Asia.
>

I have heard that MFJ uses piece workers, local or otherwise, to make their products! Wonder where the truth lies? It would seem to be plausible due to the random quality of their product line.

I have purchased many MFJ products and this reflects my experience. If you saw my previous post, I echo the attitude issues as why I prefer not to do business with MFJ...

73, -jj - n2mzh

Date: Sun, 24 Jul 1994 12:02:53 GMT
From: pa.dec.com!datum.nyo.dec.com!doublj.njo.dec.com!jeff@decwrl.dec.com
To: ham-ant@ucsd.edu

References <dmartin.093o@dlink.uucp>, <gregCt52vw.HD2@netcom.com>,
<30s5c3\$rfr@apple.com>u
Subject : Re: mfj 1796

In article <30s5c3\$rfr@apple.com> kchen@apple.com (Kok Chen) writes:
>
>Would be kinda difficult to load this antenna, I imagine. Being an
>imaginary antenna, it obviously has an impedance of $z = i50$ ohms.
><grin>

I heard from a very reliable source yesterday (has had the mfj1796 on order for 22 months now!), that they have not even shipped ONE of these and that they are still awaiting hardware to complete this critters... the above comment is too accurate!

n2mzh -jj

End of Ham-Ant Digest V94 #238
